

Docket No. AUS920030825US1

CLAIMS:

What is claimed is:

1. A method, in a data processing system, for generating a minimized call tree data structure from trace data obtained from a plurality of executions of a computer program, comprising:

obtaining a plurality of call tree data structures corresponding to the trace data for the plurality of executions of the computer program;

generating a minimized call tree data structure from the plurality of call tree data structures, wherein the minimized call tree data structure includes a minimum set of nodes that are consistent between the plurality of call tree data structures; and

outputting the minimized call tree data structure.

2. The method of claim 1, further comprising:

inputting the trace data to an arcflow tool, wherein the arcflow tool generates the plurality of call tree data structures based on the trace data.

3. The method of claim 1, wherein the plurality of call tree data structures are xtree data structures.

4. The method of claim 1, wherein generating the minimized call tree data structure includes:

copying a first call tree data structure; and

Docket No. AUS920030825US1

walking a second call tree data structure over the first call tree data structure to generate the minimized call tree data structure.

5. The method of claim 4, wherein walking the second call tree data structure over the first call tree data structure includes:

for each node that exists in both the first call tree data structure and the second call tree data structure, generating a node in the minimized call tree data structure and associating values with the node.

6. The method of claim 5, wherein the values associated with the node are values that correspond to the minimum of the values associated with corresponding nodes in the first call tree data structure and the second call tree data structure.

7. The method of claim 4, wherein walking the second call tree data structure over the first call tree data structure includes:

for each node that exists in only one of the first call tree data structure and the second call tree data structure, inhibiting creating a node in the minimum call tree data structures.

8. The method of claim 6, wherein the values associated with each node in the minimized call tree data structure include a minimum base value, a minimum number of calls,

Docket No. AUS920030825US1

a minimum cumulative value, and a minimum absolute cumulative value.

9. A computer program product in a computer readable medium for generating a minimized call tree data structure from trace data obtained from a plurality of executions of a computer program, comprising:

first instructions for obtaining a plurality of call tree data structures corresponding to the trace data for the plurality of executions of the computer program;

second instructions for generating a minimized call tree data structure from the plurality of call tree data structures, wherein the minimized call tree data structure includes a minimum set of nodes that are consistent between the plurality of call tree data structures; and

third instructions for outputting the minimized call tree data structure.

10. The computer program product of claim 9, further comprising:

fourth instructions for inputting the trace data to an arcflow tool, wherein the arcflow tool generates the plurality of call tree data structures based on the trace data.

11. The computer program product of claim 9, wherein the plurality of call tree data structures are xtree data structures.

Docket No. AUS920030825US1

12. The computer program product of claim 9, wherein the second instructions for generating the minimized call tree data structure include:

instructions for copying a first call tree data structure; and

instructions for walking a second call tree data structure over the first call tree data structure to generate the minimized call tree data structure.

13. The computer program product of claim 12, wherein the instructions for walking the second call tree data structure over the first call tree data structure include:

for each node that exists in both the first call tree data structure and the second call tree data structure, instructions for generating a node in the minimized call tree data structure and associating values with the node.

14. The computer program product of claim 13, wherein the values associated with the node are values that correspond to the minimum of the values associated with corresponding nodes in the first call tree data structure and the second call tree data structure.

15. The computer program product of claim 12, wherein the instructions for walking the second call tree data structure over the first call tree data structure include:

Docket No. AUS920030825US1

for each node that exists in only one of the first call tree data structure and the second call tree data structure, instructions for inhibiting creating a node in the minimum call tree data structures.

16. The computer program product of claim 14, wherein the values associated with each node in the minimized call tree data structure include a minimum base value, a minimum number of calls, a minimum cumulative value, and a minimum absolute cumulative value.

17. An apparatus for generating a minimized call tree data structure from trace data obtained from a plurality of executions of a computer program, comprising:

means for obtaining a plurality of call tree data structures corresponding to the trace data for the plurality of executions of the computer program;

means for generating a minimized call tree data structure from the plurality of call tree data structures, wherein the minimized call tree data structure includes a minimum set of nodes that are consistent between the plurality of call tree data structures; and

means for outputting the minimized call tree data structure.

18. The apparatus of claim 17, further comprising:

means for inputting the trace data to an arcflow tool, wherein the arcflow tool generates the plurality of call tree data structures based on the trace data.

Docket No. AUS920030825US1

19. The apparatus of claim 17, wherein the plurality of call tree data structures are xtree data structures.

20. The apparatus of claim 17, wherein the means for generating the minimized call tree data structure includes:

- means for copying a first call tree data structure;
- and

- means for walking a second call tree data structure over the first call tree data structure to generate the minimized call tree data structure.

21. The apparatus of claim 20, wherein the means for walking the second call tree data structure over the first call tree data structure includes:

- for each node that exists in both the first call tree data structure and the second call tree data structure, means for generating a node in the minimized call tree data structure and associating values with the node.

22. The apparatus of claim 21, wherein the values associated with the node are values that correspond to the minimum of the values associated with corresponding nodes in the first call tree data structure and the second call tree data structure.

23. The apparatus of claim 20, wherein the means for walking the second call tree data structure over the first call tree data structure includes:

Docket No. AUS920030825US1

for each node that exists in only one of the first call tree data structure and the second call tree data structure, means for inhibiting creating a node in the minimum call tree data structures.

24. The apparatus of claim 22, wherein the values associated with each node in the minimized call tree data structure include a minimum base value, a minimum number of calls, a minimum cumulative value, and a minimum absolute cumulative value.